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OBSERVATIONS OF NESTING PRAIRIE FALCONS IN THE LOS PADRES NATIONAL FOREST

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PRAIRIE FALCON (*Falco mexicanus*) nesting surveys were conducted by the U.S. Forest Service and California Department of Fish and Game on the Mt. Pinos (MPRD) and Santa Lucia (SLRD) Ranger Districts, Los Padres National Forest during April, May and June, 1981. Nine historical nesting territories were surveyed on the MPRD, of which 4 were active, and 14 historical territories were surveyed on the SLRD, of which 9 were active. An average of 3.3 young hatched per eyrie (N=3). Nine nestlings successfully fledged from these eyries (X=3.0 young per eyrie).

The goal of this study was to survey 2 Ranger Districts on the Los Padres National Forest in southwestern California and determine activity at each eyrie and productivity at 3 eyries. Productivity parameters provide a measure of reproductive success and allow comparisons with earlier determinations for the same populations (Johnson, 1978).

The survey area encompasses prairie falcon nesting territories in Santa Barbara, Ventura, San Luis Obispo and Kern counties, California.

Prairie falcon eyries were located and plotted on topographical maps during 1979 (Alten and Keasler, 1979). Observation points for viewing the eyries were chosen that provided viewing directly into nest cavities at distances ranging from 30 m up to 1 km. Disturbances were minimized by not climbing to eyries. Observation periods were restricted to 2 h in length. Observations were made

with Bushnell 10x50 Explorer binoculars and a Bushnell 20-45x Zoom Spacemaster spotting scope.

Prey remains and regurgitated pellets were collected from 2 eyries. Adult Prairie Falcons at BC-1 were observed bringing 1 horned lizard (*Phrynosoma* sp.), 4 ground squirrels (*Spermophilus* sp.) and 1 unknown prey item to the eyrie. At VV-8, adult falcons delivered 3 ground squirrels and 1 western meadowlark (*Sturnella neglecta*) to the eyrie.

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Reuse of Nesting Territories and Eyries. — Three of the 22 known nesting territories have remained active since 1977. Two have remained occupied for 4 of the 5 years that surveys have been completed. The remaining

Table 1: Summary of Prairie Falcon Nesting Activity. Mt. Pinos and Santa Lucia Ranger Districts, Los Padres National Forest. 1977-81.

Eyrie	1977	1978	1979	1980	1981
BC-1	NC	NC	A	A	A
HV-2	NC	NC	A	NC	NA
JW-3	NC	NC	A	NC	A
CR-4	NC	NC	A	NA	NA
SB-5	NC	NC	A	NA	NA
DC-6	NC	NC	A	NA	NA
CC-7	NC	NC	NC	NC	NC
VV-8	NC	NC	A	A	A
LC-9	NC	NC	NC	NC	A
BR-2	A	A	A	A	A
HM-11	A	NA	NA	NA	A
BC-38	A	NC	A	A	A
GM-39	A	A	A	A	A
BT-40	NC	NC	A	A	NC
MM-41	NC	NC	A	A	NC
BR-43	A	NC	NC	NC	NC
BS-45	A	NC	NC	NC	NC
HM-46	A	A	NA	A	A
TC-55	A	A	A	A	A
CC-56	NC	NC	NA	A	A
AC-57	NC	NC	A	A	A
TR-58	NC	NC	NC	NC	A

A - Active; NA - Not Active; NC - Not Counted.

17 were active for 3 years or less (Table 1).

1981 Breeding Season, MPRD. — When surveyed between March 11-18, 5 eyries were active with adult Prairie Falcons in the nest territory. Eight historical eyries were resurveyed in late April and early May. Only 3 eyries, however, remained active. Young hatched at these 3 eyries during the week of May 3-9. Nestlings fledged between June 8 and 19.

Productivity. — Clutch size was not determined. Assuming a minimum clutch size, however, from the brood size of active eyries ($N=3$), a minimum mean clutch size of 3.7 eggs/nest can be inferred. Brood sizes and fledging success in 1979 and 1981 are summarized in Table 2. For both years the average fledging success is above the 2.56 needed to maintain a stationary population (Garrett and Mitchell, 1973).

Mortality. — Two cases of egg loss or pre fledging mortality were observed. When VV-8 was observed on May 17, 1 unhatched egg was present in the nest with 3 nestlings. When observed again on May 31, the egg was no longer present. A 1-2 day old nestling was found directly below the JW-3 eyrie in an emaciated condition.

Nesting Activity. — During 1977, both activity and productivity at prairie falcon eyries on the SLRD was high. Activity and productivity dropped in 1978 for some reason. In 1979 the level of activity at the eyries was lower, but the productivity was higher than the previous year. Activity during 1980 and 1981 appeared to be fairly high and when young were seen at the eyries, they were seen in numbers above the 2.56 fledglings per nest needed to maintain a stable population (Schlorff, 1979).

Productivity and activity at the prairie falcon eyries on the MPRD during 1979 was high. A complete survey was not conducted in 1980, so many eyries that may have been active were determined to be inactive or not counted. Activity at the eyries located in 1979 was down in 1981. Productivity at these active eyries was also lower than the 1979 level.

It is difficult to say why the number of active eyries observed in 1979 was not seen in 1981 on the MPRD. Perhaps the falcons are nesting in alternate areas unknown to the surveyors. Prey did not appear to be limiting. Garrett and Mitchell (1973) stated that the observed rates of prairie falcon production in California during 1971 and

Table 2: Summary of Prairie Falcon Nestling Production. Mt. Pinos Ranger District, Los Padres National Forest. 1979 and 1981.

Eyrie	1979		1981	
	Brood Size	Fledging Success	Brood Size	Fledging Success
BC-1	4	4	4	4
HV-2	4	4		
JW-3	2*	2*	3	2
CR-4	5	0		
SB-5	5	5		
DC-6	3*	U		
CC-7	U	U		
VV-8	5	5	3	3
TOTAL	28	20	10	9
Mean	4**	3.3***	3.3	3

* - Number may have been greater, but a complete count was not possible.

** - Mean excluding CC-7.

*** - Mean excluding DC-6 and CC-7.

U - Undetermined.

1972 was below expectation and indicated a declining population. However, in the Central region of their study, which includes the area of this study, a production rate in excess of 2.56 fledglings/total pairs was observed. Statewide, they determined an average production rate of 1.59 fledglings/pairs studied. They also observed an extensive shifting of production between eyrie locations in 1970 and 1971, with few of the nesting territories supporting productive pairs in both years. This may be the case on the MPRD.

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